



Industrial Hygiene
JUN 19 1990

MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION S0253 SI-4

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: SOLUTION S0253 SI-4

DESCRIPTION: Cl-1, Si-4, aqueous solution and chloroacetic acid and sodium acetate

NFPA 704M/HMIS RATING: 2/2 HEALTH 0/0 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Chloroacetic acid	79-11-8	10-20
Sodium acetate	127-09-3	10-20

SECTION 3 PRECAUTIONARY LABEL INFORMATION

WARNING: Causes eye injury and skin irritation. May be harmful if swallowed. Do not get in eyes. Avoid contact with skin and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Immediately flush for at least 15 minutes while holding eyelids open. Call a physician at once.
SKIN: Flush with water for 15 minutes.
INGESTION: Do not induce vomiting. Give water. Call a physician at once.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.



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SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given.
SKIN CONTACT: Can cause transient to moderate irritation.
INGESTION: Can be fatal.
INHALATION: Can be corrosive to the mucous membranes and the lungs.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Toxicity studies have been conducted on this product. The results are shown below.

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 0.7/8.0 Very milding irritating

COMMENTS: When the product was applied to the shaven backs of rabbits, redness was apparent in the challenge site of three of the six animals. However, this slight irritation resolved within 72-hours and all sites appeared normal.

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 35/110.0 @ 48-hours Severe irritant

COMMENTS: Application of the product into the conjunctival sac of one eye of each of a group of six rabbits produced corneal opacities and iritis in all of the animals. Twenty-one days later, opacities and iritis still persisted in four animals and one animal, respectively.

Moderate to severe conjunctival irritation characterized by redness, swelling and discharge was noted in all of the test animals and persisted until the end of the study (21-days) in three of the animals. Pannus and circumcorneal growth of the conjunctival membrane were also noted.

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Colorless
pH (NEAT) =

FORM: Liquid
Less than 2

ASTM E-70



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PRODUCT SOLUTION S0253 SI-4

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SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

(CONTINUED)

FLASH POINT: None

NOTE: These physical properties are typical values for this product.

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: None

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

Avoid alkaline materials (eg. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanides, sulfides, hypochlorites, chlorites) which can generate heat with splattering or boiling and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO₂ may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: If it is possible to generate significant levels of vapors or mists, a NIOSH approved or equivalent respirator is recommended.

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where mists may be released.

PROTECTIVE EQUIPMENT: Wear gloves, apron and chemical splash goggles.

The availability of an eye wash fountain and safety shower is recommended.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent.



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PRODUCT SOLUTION S0253 SI-4

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SECTION 11 SPILL AND DISPOSAL INFORMATION

(CONTINUED)

DISPOSAL: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D002.

Acid solutions should be neutralized to a waste treatment plant.

Empty product containers if plastic, should be punctured and placed in the garbage collection container.

SECTION 12 ENVIRONMENTAL INFORMATION

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - CORROSIVE LIQUID, N.O.S.
CORROSIVE MATERIAL UN 1760
CONTAINS - CHLOROACETIC ACID

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.

Chloroacetic acid - Corrosive
Sodium acetate - Irritant

CERCLA/SUPERFUND, 40 CFR 117, 302:
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product contains chloroacetic acid, which is listed in Appendix A and B as an Extremely Hazardous Substance. The statutory threshold planning quantity for this substance is 100 pounds.

A release of 8 pounds of product will require a notification to your State



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PRODUCT SOLUTION S0253 SI-4

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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

Emergency Response Commission.

You may also be required to notify the NATIONAL RESPONSE CENTER

- See CERCLA/SUPERFUND, above.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS
(40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- XX Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever is less, of an extremely hazardous substance.

After October 17, 1989, MSDS(s), or a list of product names for all hazardous substances between zero (0) and 10,000 pounds, not previously reported, must be submitted.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:

If this product becomes a waste, it does meet the criteria of a hazardous waste as defined under RCRA 40 CFR 261 (consult Section 11).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15/
formerly Sec. 307, 40 CFR 116/formerly Sec. 311:
None of the ingredients are specifically listed.



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PRODUCT SOLUTION S0253 SI-4

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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:

This product contains the following ingredients covered by the Clean Air Act:

Chloroacetic acid - Section 111

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

None of the chemicals on the current Proposition 65 list are known to be present in this product.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

The following states identify the ingredient(s) shown below as hazardous:

Massachusetts, New Jersey - Chloroacetic acid

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

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MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION S0253 SI-4

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